

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:)	FINDING OF VIOLATION
)	
Publix Super Markets, Inc.)	EPA-5-21-COE-04
Lakeland, Florida)	
)	
Proceedings Pursuant to)	
<u>the Clean Air Act, 42 U.S.C. §§ 7401 et seq.</u>)	

FINDING OF VIOLATION

The U.S. Environmental Protection Agency (EPA) finds that Publix Super Markets, Inc. (Publix) is violating the Clean Air Act (“CAA”), 42 U.S.C. § 7401 *et seq.* Specifically, Publix failed to comply with the Recycling and Emission Regulations found at 40 C.F.R. Part 82, Subpart F, as follows:

Statutory and Regulatory Authority

1. Section 608 of the CAA, 42 U.S.C. § 7671g, requires EPA to establish a national recycling and emission reduction program to addresses the use and disposal of ozone depleting substances (“ODS”), such as class I and class II substances.
2. Section 602 of the CAA, 42 U.S.C. § 7671a, lists class I and class II ODSs. Section 602(a) and (b) of the CAA lists hydrochlorofluorocarbon-12 (HCFC-12) as a class I ODS and hydrochlorofluorocarbon-22 (HCFC-22) as a class II ODS. 42 U.S.C. § 7671a(a) and (b).
3. Pursuant to Section 608(a) of the CAA, 42 U.S.C. § 7671g(a), EPA first promulgated rules to establish a national recycling and emission reduction program to addresses the use and disposal of ODS on May 14, 1993 at 40 C.F.R. Part 82, Subpart F. 58 Fed. Reg. 28712. These rules apply to, among others, any person servicing, maintaining, repairing, or owning appliances as those terms are defined at 40 C.F.R. § 82.152 and 40 C.F.R. § 156(j).
4. In 1995, EPA amended 40 C.F.R. Part 82, Subpart F to include, among other things, new definitions and revised leak repair requirements for commercial refrigerant appliances and appliances such as comfort cooling appliances. 60 Fed. Reg. 40440 (August 8, 1995) (the “1995 Rule”).
5. In 2016, EPA amended 40 C.F.R. Part 82, Subpart F to include, among other things, revised definitions, new record keeping and reporting requirements, and a reduced

leak rate threshold for comfort cooling appliances and commercial refrigeration appliances. 81 Fed. Reg. 82356 (November 18, 2016) (the “2016 Rule”).¹

6. The 2016 Rule became effective on January 1, 2017. To allow time for the regulated community to prepare for the new requirements, the compliance date for the revised leak repair provisions was January 1, 2019. 81 Fed. Reg. 82342.
7. Under the 1995 Rule, “Appliance” means “any device which contains and uses a refrigerant and which is used for household or commercial purposes, including any air conditioner, refrigerator, chiller, or freezer.” 40 C.F.R. § 82.156(j).
8. Under the 2016 Rule, “Appliance” means “any device which contains and uses a class I or class II substance or substitute as a refrigerant and which is used for household or commercial purposes, including any air conditioner, motor vehicle air conditioner, refrigerator, chiller, or freezer. For a system with multiple circuits, each independent circuit is considered a separate appliance.” 40 C.F.R. § 82.152.
9. Under the 2016 Rule, “Comfort cooling” means “the air-conditioning appliances used to provide cooling in order to control heat and/or humidity in occupied facilities including but not limited to residential, office, and commercial buildings.” 40 C.F.R. § 82.152.
10. Under the 1995 Rule, “Commercial Refrigeration” means, for the purposes of 40 C.F.R. § 82.156(i), “the refrigeration appliances utilized in the retail food and cold storage warehouse sectors. Retail food includes the refrigeration equipment found in supermarkets, convenience stores, restaurants and other food service establishments.” 40 C.F.R. § 82.156(j).
11. Under the 2016 Rule, “Commercial refrigeration” means, for the purposes of Subpart F not including 40 C.F.R. § 82.156(i), “the refrigeration appliances used in the retail food and cold storage warehouse sectors. Retail food appliances include the refrigeration equipment found in supermarkets, convenience stores, restaurants and other food service establishments. . . .” 40 C.F.R. § 82.152.
12. Under the 1995 Rule, “Leak Rate” means, for the purposes of 40 C.F.R. § 82.156(i), “the rate at which an appliance is losing refrigerant, measured between refrigerant charges. . . . The rate is calculated using only one of the following methods [Method 1 or Method 2 as set forth in the definition] for all appliances located at an operating facility.” 40 C.F.R. § 82.156(j).
13. Under the 2016 Rule, “Leak Rate” means, for the purposes of Subpart F not including 40 C.F.R. § 82.156(i), “the rate at which an appliance is losing refrigerant, measured

¹ These rules were also amended at 59 Fed. Reg. 42956, 42962, Aug. 19, 1994; 59 Fed. Reg. 55926, Nov. 9, 1994; 60 Fed. Reg. 40440, Aug. 8, 1995; 68 Fed. Reg. 43807, July 24, 2003; 69 Fed. Reg. 11979, Mar. 12, 2004; 70 Fed. Reg. 1991, Jan. 11, 2005; 79 Fed. Reg. 29690, May 23, 2014; and 85 Fed. Reg. 14171, Apr. 10, 2020.

between refrigerant charges. The rate must be calculated using one of the following methods [Method 1 or Method 2 as set forth in the definition]. The same method must be used for all appliances subject to the leak repair requirements located at an operating facility.” 40 C.F.R. § 82.152.

14. The 1995 and 2016 Rule’s definition of “Leak Rate” include identical equations for Method 1 and Method 2, respectively.
15. Under both the 1995 and 2016 Rule, “person” means “any individual or legal entity, including an individual, corporation, partnership, association, state, municipality, political subdivision of a state, Indian tribe, and any agency, department, or instrumentality of the United States, and any officer, agent, or employee thereof.” 40 C.F.R. § 82.152.
16. Under the 1995 Rule, “Refrigerant” means, for the purposes of 40 C.F.R. § 82.156(i), “any substance consisting in part or whole of a class I or class II ozone-depleting substance that is used for heat transfer purposes and provides a cooling effect.” 40 C.F.R. § 82.156(j).
17. Under the 2016 Rule, “Refrigerant” means, purposes of Subpart F not including 40 C.F.R. § 82.156(j), “any substance, including blends and mixtures, consisting in part or whole of a class I or class II ozone-depleting substance or substitute that is used for heat transfer purposes and provides a cooling effect.” 40 C.F.R. § 82.152.
18. Under both the 1995 and 2016 Rule, “technician,” means in part, “any person who performs maintenance, service, or repair of an appliance (except MVACs) that could be reasonably expected to violate the integrity of the refrigerant circuit and therefore release refrigerants into the environment.” 40 C.F.R. § 82.152.
19. Under the 1995 Rule, 40 C.F.R. § 82.156(i)(1) requires, in part:

Owners or operators of commercial refrigeration equipment normally containing more than 50 pounds of refrigerant must have leaks repaired in accordance with paragraph (i)(9) of this section, if the appliance is leaking at a rate such that the loss of refrigerant will exceed 35 percent of the total charge during a 12-month period Repairs must bring the annual leak rate to below 35 percent.
20. Under the 1995 Rule, 40 C.F.R. § 82.156(i)(5) requires, in part:

Owners or operators of comfort cooling appliances normally containing more than 50 pounds of refrigerant and not covered by paragraph (i)(1) or (i)(2) of this section must have leaks repaired in accordance with paragraph (i)(9) of this section if the appliance is leaking at a rate such that the loss of refrigerant will exceed 15 percent of the total charge during a 12-month period Repairs must bring the annual leak rate to below 15 percent.

21. Under the 1995 Rule, 40 C.F.R. § 82.156(i)(6) requires, in part:

Owners or operators are not required to repair leaks as provided in paragraphs (i)(1), (i)(2), and (i)(5) of this section if, within 30 days of discovering a leak greater than the applicable allowable leak rate, or within 30 days of a failed follow-up verification test, or after making good faith efforts to repair the leaks as described in paragraph (i)(6)(i) of this section, they develop a one-year retrofit or retirement plan for the leaking appliance.

22. Under the 1995 Rule, 40 C.F.R. § 82.156(i)(9) requires, in part:

Owners or operators must repair leaks pursuant to paragraphs (i)(1), (i)(2) and (i)(5) of this section within 30 days after discovery, or within 30 days after when the leaks should have been discovered if the owners intentionally shielded themselves from information which would have revealed a leak, unless granted additional time pursuant to 40 C.F.R. § 82.156(i).

23. Under the 2016 Rule, beginning January 1, 2019, 40 C.F.R. § 82.157(c)(1) and (2) requires, in part:

(1) Owners or operators must repair appliances with a leak rate over the applicable leak rate in this paragraph in accordance with paragraphs (d) through (f) of this section unless the owner or operator elects to retrofit or retire the appliance in compliance with paragraphs (h) and (i) of this section. If the owner or operator elects to repair leaks, but fails to bring the leak rate below the applicable leak rate, the owner or operator must create and implement a retrofit or retirement plan in accordance with paragraphs (h) and (i) of this section.

(2) Leak Rates:

- (i) 20 percent leak rate for commercial refrigeration equipment; . . .
- (iii) 10 percent leak rate for comfort cooling appliances or other appliances with a full charge of 50 or more pounds of refrigerant not covered by (c)(2)(i) or (ii) of this section.

24. Under the 2016 Rule, beginning January 1, 2019, “owners or operators must identify and repair leaks in accordance with this paragraph within 30 days (or 120 days if an industrial process shutdown is required) of when refrigerant is added to an appliance exceeding the applicable leak rate in paragraph (c) of this section.” 40 C.F.R. §82.157(d).

25. Under the 2016 Rule, beginning January 1, 2019, “leaks must be repaired such that the leak rate is brought below the applicable leak rate. This must be confirmed by the leak rate calculation performed upon the next refrigerant addition. The leaks will be presumed to be repaired if there is no further refrigerant addition for 12 months after the repair or if the leak inspections required under paragraph (g) do not find

any leaks in the appliance. Repair of leaks must be documented by both an initial and a follow-up verification test or tests.” 40 C.F.R 82.157(d)(2).

26. Under the 2016 Rule, 40 C.F.R. § 82.157(j) requires, in part:

Owners or operators of appliances containing 50 pounds or more of refrigerant that leak 125 percent or more of the full charge in a calendar year must submit a report to EPA at the address in paragraph (m) of this section. This report must be submitted by March 1 of the subsequent year and describe efforts to identify leaks and repair the appliance.

27. On September 2, 2015, the Administrator of the Environmental Protection Agency named the Region 5 Administrator as the national ODS center of excellence manager and delegated the authority to take action to enforce the federal requirements for stratospheric ozone protection in all U.S. Environmental Protection Agency regions, pursuant to 40 C.F.R. Part 82 and Title VI of the Clean Air Act.

Findings of Fact

28. Publix is a “person” as defined at 40 C.F.R. § 82.152.
29. On September 9, 2018, EPA issued a CAA Section 114 Request for Information (CAA 114 RFI) to Publix. The September 2018 CAA 114 RFI asked Publix to submit a list of all CCAs, CRAs, and industrial process refrigeration units (IPRUs) normally containing more than 50 pounds of a class I or class II substances at all supermarkets or manufacturing facilities owned and/or operated by Publix or any of its subsidiaries.
30. Chlorofluorocarbon-12, whose chemical name is dichlorodifluoromethane, is a chlorofluorocarbon that is a class I substance sold under the trade name R-12.
31. Hydrochlorofluorocarbon-22, whose chemical name is chlorodifluoromethane, is a chlorofluorocarbon that is a class II substance sold under the trade name R-22.
32. In response to the September 2018 CAA 114 RFI, Publix provided a list of 8,305 CRAs, CCAs, and IPRUs at 1,204 facilities.
33. On November 7, 2019, EPA issued a second CAA 114 RFI to request information regarding full charges, repairs and refrigerant additions regarding 456 CCAs and CRAs that use R-22.
34. Publix responded to the November 2019 CAA 114 RFI on February 28, 2020 and provided a subsequent response on March 2, 2020. Publix’s February 28, 2020, response to the CAA 114 RFI included a spreadsheet providing, among other things, amounts of refrigerant added to CCAs and CRAs, a description of the service or

repair conducted, and the corresponding date when the service or repair was conducted.

35. Except as otherwise provided below, relevant to this matter, for each service date when Publix added refrigerant to a CCA or CRA, Publix calculated a leak rate but was not clear whether it used Method 1 or Method 2.
36. In response to questions asking Publix to state whether the company has developed a retrofit or retirement plan for each CCA or CRA with a leak rate greater than its applicable standard, Publix provided its written procedures for processing equipment replacement requests and a refrigerant retrofit guide.

Multiple Leaks under 1995 Rule: 40 C.F.R. §§ 82.156(i)(1) and (5)

37. Publix reported the refrigerant additions indicated in the table below to New Rack 05, a CRA with a full charge of 524 pounds, due to a leak at unidentified location at the 0410 - Berkshire Commons location. Records indicate the 2018 refrigerant addition was due to a previous repair. EPA was unable to verify the previous leak location and the associated repair based on the information Publix provided. More specifically, Publix identified the leak location as “other must explain - [description]”.² Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
Other - Must Explain (1)	7/21/2017	70	N/A	13.36%	13.36%
Other - Must Explain (1)	2/14/2018	122	208	40.86%	36.64%

38. Publix reported the refrigerant additions indicated in the table below to New Rack 03, a CRA with a full charge of 939 pounds, due to a leak at the discharge line at the 0436 - The Market at Southside location. Records indicates there was a leak repair made on January 11, 2018; however, EPA does not have information regarding how much refrigerant was added. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

² Publix’s descriptions for “Other Must Explain” include one of the following: (1) Addition following a previous repair; (2) No leak location identified; and (3) No leak found. For purposes of this FOV, each time “Other Must Explain” is identified in a chart, please note the number in the parenthesis corresponds to the numbers listed in the previous sentence, e.g., “Other – Must Explain (1)” means “(1) Addition following a previous repair.”

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
Discharge Line	1/11/2018	Unknown	N/A		
Discharge Line	12/28/2018	375	N/A	40%	40%

39. Publix reported the refrigerant additions indicated in the table below to Rack 03, a CRA with a full charge of 939 pounds, due to a leak at the liquid line at the 0436 – The Market at Southside location. Records do not indicate the location of the leak or the repair for the August 2018 addition. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
Liquid Line	7/3/2018	75	N/A	8%	8%
Other – Must Explain (3)	8/13/2018	100	41	95%	19%

40. Publix reported the refrigerant addition indicated in the table below to Rack 04, a CRA with a full charge of 400 pounds, to bring the rack to spec at the 0447 - La Plaza Grande West location. Records do not indicate that a repair was made after the refrigerant addition. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
Other - Must Explain (2)	11/23/2018	200	309	50%	50%

41. Publix reported the refrigerant addition indicated in the table below to Rack 06, a CRA with a full charge of 500 pounds, to bring the rack to spec at the 0507 - Woodland Center location. Records do not indicate that a repair was made after the refrigerant addition. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
Other - Must Explain (2)	1/5/2018	180	N/A	36.00%	36.00%

42. Publix reported the refrigerant additions indicated in the table below to Rack 05, a CRA with a full charge of 560 pounds, due to a leak at the evaporator at the 0507 - Woodland Center location. Records do not indicate the location of the leak for the May 21, 2016 refrigerant addition and the June 1, 2016 addition. In addition, the amount of refrigerant added, if any, was not recorded for the June 1, 2016 addition. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
Other - Must Explain (2)	5/31/2016	30	N/A	5.36%	5.36%
Unknown	6/1/2016	Not recorded	1		
Evaporator	7/29/2016	60	59	66.28%	16.07%
Evaporator	8/15/2016	90	76	345.06%	32.14%
Evaporator	1/18/2017	180	215	75.21%	64.29%
Other - Must Explain (2)	3/7/2017	58	280	78.76%	74.64%

43. Publix reported the refrigerant additions indicated in the table below to Rack 02, a CRA with a full charge of 500 pounds, due to a leak at the compressor at the 0515 - Abbotts Village at Ocee location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
11/20/2017	100	N/A	20%	20%
6/24/2018	198	216	67%	60%
7/12/2018	100	18	406%	80%
10/11/2018	90	91	72%	98%

44. Publix reported the refrigerant additions indicated in the table below to Rack 07, a CRA with a full charge of 500 pounds, due to a leak at the compressor at the 0519 - Cumming 400 Shopping Center location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
11/19/2017	200	N/A	40%	40%
1/16/2018	300	58	378%	100%

45. Publix reported the refrigerant additions indicated in the table below to Rack 02, a CRA with a full charge of 755 pounds, due to a leak at the suction line at the 0885 - Publix at Grand Boulevard location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
6/1/2018	90	N/A	12%	12%
7/1/2018	210	30	338%	40%
7/20/2018	120	19	305%	64%
8/28/2018	150	15	186%	79%

46. Publix reported the refrigerant additions indicated in the table below to Rack 05, a CRA with a full charge of 625 pounds, due to a leak at the evaporator at the 1074 - Shopping Center at Crow's Corner location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
1/30/2017	120	N/A	19%	19%
5/24/2017	90	114	46%	34%
9/21/2017	100	120	49%	50%

47. Publix reported the refrigerant additions indicated in the table below to Rack 02, a CRA with a full charge of 825 pounds, due to a leak at the discharge line at the 1075 - Northwood Crossings location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
11/1/2017	100	N/A	12%	18%
12/18/2017	100	47	94%	24%

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
2/2/2018	50	46	48%	30%
5/15/2018	100	102	43%	42%

48. Publix reported the refrigerant additions indicated in the table below to Rack 02, a CRA with a full charge of 825 pounds, due to a leak at the liquid line at the 1075 - Northwood Crossings location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
8/29/2016	360	N/A	44%	44%
10/31/2016	450	63	316%	98%

49. Publix reported the refrigerant additions indicated in the table below to Rack 02, a CRA with a full charge of 590 pounds, due to a leak at the suction line at the 1083 – Publix at University Town Center location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
12/21/2015	300	N/A	51%	51%
10/21/2016	60	305	12%	61%
12/28/2016	60	68	55%	20%

50. Publix reported the refrigerant additions indicated in the table below to AC 1, a CCA with a full charge of 172 pounds, due to a leak at the condenser at the 0721 - Alpharetta Commons location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
11/10/2016	50	N/A	29%	29%
1/25/2017	50	76	140%	58%

51. Publix reported the refrigerant additions indicated in the table below to AC 2, a CCA with a full charge of 160 pounds, to bring the AC 2 up to spec at the 0828 – Center at University Parkway location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
4/3/2018	61	N/A	38%	38%

52. Publix reported the refrigerant addition indicated in the table below to Rack M11, a CRA with a full charge of 375 pounds, due to a leak at the compressor at the 1331 – Publix at San Carlos location. Records do not indicate a leak location for the September 15, 2017 refrigerant addition. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days since Refrigerant Last Added	Leak Rate Method 1	Leak Rate Method 2
Other - Must Explain (2)	9/15/2017	100	N/A	27%	26.67%
Compressor	10/5/2017	100	20	487%	53.33%
Compressor	7/27/2018	100	295	33%	80.00%

53. Publix reported the refrigerant addition indicated in the table below to Rack M11, a CRA with a full charge of 375 pounds, due to a leak at the liquid line at the 1331 – Publix at San Carlos location. Records do not indicate a leak location for the March 19 and October 19, 2018 refrigerant additions. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days since Refrigerant Last Added	Leak Rate Method 1	Leak Rate Method 2
Liquid Line	1/21/2018	14	N/A	4%	
Other - Must Explain (2)	3/19/2018	55	57	94%	18.40%
Liquid Line	3/21/2018	0	2	0%	18.40%
Liquid Line	7/16/2018	100	117	83%	45.07%
Other - Must Explain (2)	10/19/2018	50	95	51%	43.73%

54. Publix reported the refrigerant additions indicated in the table below to Rack 02, a CRA with a full charge of 755 pounds, due to a leak at the liquid line at the 0885 - Publix at Grand Boulevard location. The addition on June 7, 2018 was described as being on the discharge line in the ERM Report, labeled ERM Report 2.14.20.xlsx, however the Verisae record and work order indicates that the leaks were located on the liquid line and the suction line. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
6/7/2018	120	N/A	16%	16%
6/17/2018	150	10	725%	36%
8/6/2018	120	50	116%	52%
8/13/2018	210	7	1450%	79%
2/20/2019	58	198	14%	87%
3/10/2019	60	18	161%	95%
4/26/2019	210	47	216%	123%

55. Publix reported the refrigerant additions indicated in the table below to Rack 01, a CRA with a full charge of 1,005 pounds, due to a leak at the discharge line at the 1010 - Publix in Atlantic Station location. Records do not indicate the leak location for the April 3, 4 and 18, 2018 refrigerant additions. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
Discharge Line	2/28/2018	50	N/A	5%	5%
Discharge Line	3/30/2018	100	30	121%	15%
Discharge Line	4/2/2018	100	3	1211%	25%
Other - Must Explain (2)	4/3/2018	100	1	12%	40%
Other - Must Explain (2)	4/4/2018	50	1	1816%	45%
Other - Must Explain (2)	4/18/2018	100	14	259%	55%

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
Discharge Line	10/17/2018	100	182	18%	74%
Discharge Line	1/25/2019	100	100	36%	84%

56. Publix reported the refrigerant additions indicated in the table below to AC 1, a CCA with a full charge of 172 pounds, due to a leak at the condenser at the 0721 - Alpharetta Commons location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
7/10/2018	64	531	32%	32%
7/3/2019	50	358	25%	57%

Multiple leaks under 2016 Rule: 40 C.F.R. 82.157(c)

57. Publix reported the refrigerant additions indicated in the table below to Rack 01, a CRA with a full charge of 445 pounds, due to a leak at the suction line at the 0094 – Publix in Coral Gables, FL location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the Leak Rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
1/3/2019	100	N/A	22%	22%
8/7/2019	100	216	38%	45%

58. Publix reported the refrigerant additions indicated in the table below to Rack 01, a CRA with a full charge of 500 pounds, due to a leak at the Compressor at the 0148 – Sarasota Crossings location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
2/13/2019	210	N/A	42%	42%
8/13/2019	120	181	48%	66%

59. Publix reported the refrigerant additions indicated in the table below to Rack 02, a CRA with a full charge of 470 pounds, due to a leak at the discharge line at the 0273 – Oak Valley Shopping Center location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
5/29/2019	100	N/A	21%	21%
11/8/2019	50	163	24%	32%

60. Publix reported the refrigerant additions indicated in the table below to Rack 04, a CRA with a full charge of 400 pounds, due to a leak at the compressor at the 0417 – Bayshore Gardens SC location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
6/29/2019	210	N/A	53%	53%
11/29/2019	180	153	107%	98%

61. Publix reported the refrigerant additions indicated in the table below to Rack 04, a CRA with a full charge of 814 pounds, due to bringing the unit to Publix's specifications at the 0436 – The Market at Southside location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
7/3/2018	50	N/A	6%	6%
3/5/2019	400	245	73%	55%

62. Publix reported the refrigerant addition indicated in the table below to Rack 03, a CRA with a full charge of 500 pounds, due to a leak at an unknown location at the 0734 – Venice Commons location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
Other - Must Explain (2)	11/14/2019	120	N/A	24%	24%

63. Publix reported the refrigerant additions indicated in the table below to Rack 02, a CRA with a full charge of 625 pounds, due to a leak at the discharge line at the 0823 – Lynn Haven Center location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
1/31/2019	390	N/A	62%	62%
4/10/2019	120	69	102%	82%
8/7/2019	180	119	88%	110%
11/6/2019	387	91	248%	172%

64. Publix reported the refrigerant additions indicated in the table below to Rack 05, a CRA with a full charge of 700 pounds, due to a leak at the liquid line at the 0823 – Lynn Haven Center location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
1/31/2019	210	N/A	30%	30%
4/24/2019	30	83	19%	34%
4/25/2019	60	1	3129%	43%

65. Publix reported the refrigerant additions indicated in the table below to Rack 01, a CRA with a full charge of 775 pounds, due to a leak at the evaporator at the 0825 – Mountain Park Plaza location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
4/13/2019	100	N/A	13%	13%
4/16/2019	300	3	4710%	52%

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
6/27/2019	90	72	59%	63%

66. Publix reported the refrigerant additions indicated in the table below to Rack 04, a CRA with a full charge of 825 pounds, due to a leak at the liquid line at the 1069 – Colonial Shops of Clay location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
7/31/2018	200	N/A	24%	24%
5/29/2019	80	302	12%	34%
7/4/2019	360	36	442%	78%
7/15/2019	120	11	483%	92%

67. Publix reported the refrigerant additions indicated in the table below to Rack 04, a CRA with a full charge of 825 pounds, due to a leak at the evaporator at the 1069 – Colonial Shops of Clay location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
3/19/2019	200	N/A	24%	24%
5/24/2019	150	66	101%	42%

68. Publix reported the refrigerant additions indicated in the table below to Rack 03, a CRA with a full charge of 500 pounds, due to a leak at the evaporator at the 1347 – Fairmont Plaza location. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
3/25/2019	133	N/A	27%	27%
8/21/2019	110	149	54%	49%

69. Publix reported the refrigerant addition indicated in the table below to AC 3, a CCA with a full charge of 100 pounds, due to a leak at an unknown location at the 0447 – La Plaza Grande West location. Record indicated that this was related to a previous

repair, however EPA was unable to verify the repair. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
Other - Must Explain (1)	3/25/2019	17	N/A	17%	17%

70. Publix reported the refrigerant additions indicated in the table below to Rack 05, a CRA with a full charge of 675 pounds, due to a leak at the discharge line at the 1075 – Northwood Crossings location. Record indicates there was an addition from a previous repair on January 30, 2019. There is no Verisae record associated with the January addition. According to the records provided, the previous repair to this addition was on November 14, 2018. EPA was unable to verify the associated repair based on the information that Publix provided. Because Publix did not specify the leak rate formula that it used for this appliance, EPA calculated the leak rates with Method 1 and Method 2:

Leak Location	Date of Refrigerant Addition	Pounds of Refrigerant Added	Number of Days Since Refrigerant Last Added	Method 1 Leak Rate	Method 2 Leak Rate
Discharge Line	11/14/2018	200	N/A	30%	30%
Unknown	1/30/2019	100	77	70%	44%
Discharge Line	8/13/2019	30	195	8%	49%

Findings of Violations

71. As set forth in paragraphs 37 through 49, and 52 through 55 above, in 2016, 2017, and 2018, Publix failed to repair the leaks on a CRA to bring the annual leak rate to below 35 percent, and Publix failed to develop a 1-year retrofit or retirement plan for the CRA according to 40 C.F.R. § 82.156(i)(6). Publix thereby violated 40 C.F.R. § 82.156(i)(1).
72. As set forth in paragraphs 50 through 51, and 56 above, in 2016, 2017, and 2018, Publix failed to repair the leaks on a CCA to bring the annual leak rate to below 20 percent, and Publix failed to develop a 1-year retrofit or retirement plan for the CCA according to 40 C.F.R. § 82.156(i)(6). Publix thereby violated 40 C.F.R. § 82.156(i)(5).

73. As set forth in paragraphs 57 through 68, and 70 above, Publix failed to repair the leaks on a CRA to bring the annual leak rate to below 20 percent, and Publix failed to develop a 1-year retrofit or retirement plan for the CRA according to 40 C.F.R. §§ 82.157(d) and (h). Publix thereby violated 40 C.F.R. §§ 82.157(c)(1) and (c)(2)(i).
74. As set forth in paragraph 69, above, in 2019, Publix failed to repair the leaks on a CCA to bring the annual leak rate to below 15 percent, and Publix failed to develop a 1-year retrofit or retirement plan for the CCA according to 40 C.F.R. §§ 82.157(d) and (h). Publix thereby violated 40 C.F.R. §§ 82.157(c)(1) and (c)(2)(iii).

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Director
Enforcement and Compliance Assurance Division